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ABSTRACT

This research involved two studies--one of teacher education students and one of teacher education faculty--to examine preservice teachers' views about gender equity in learning and schooling and the role of preservice instruction in addressing gender issues in education. The student assessment instrument examined three major categories of gender-equitable classroom practices, including teacher-student interactions, classroom management/organization, and teacher expectations. Participants were 758 student teachers at 3 universities. The faculty assessment instrument included examples of 30 gender-related topics that might be included in the teacher education curricula. Faculty had to rate the extent to which they included the topics in their classes and the extent to which they thought the topics should be included somewhere in preservice education. Participants were 247 full-time teacher educators in 29 preservice teacher education institutions. Data analysis indicated that there were low levels of student teacher knowledge about gender-equitable classroom practices, low levels of faculty instruction about gender, and high levels of faculty advocacy on gender as an appropriate topic for instruction in teacher education. (Contains 10 tables and 69 references.) (SM)

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PERSPECTIVES ON GENDER EQUITY INSTRUCTION IN TEACHER EDUCATION PROGRAMS

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PERSPECTIVES ON GENDER EQUITY INSTRUCTION IN TEACHER EDUCATION PROGRAMS

Objectives

Gender inequity has resulted in disparate educational outcomes contributing to male and female stereotypical life roles based on the circumstance of birth (AAUW, 1992; Campbell, Voelkl, & Donahue, August, 1997). Awareness of the evidence and existence of sexism, coupled with a desire to counteract sexism, must precede efforts to make a classroom environment gender-equitable (Eccles, 1989). One of the challenges for the future is to address preservice teachers' views about gender equity as it relates to learning and schooling. Equally important is consideration of the role preservice instruction plays in addressing gender issues in education. To examine these areas, two separate studies were undertaken--one of teacher education students, the other of teacher education faculty. The following general questions guided the research.

1. To what extent are preservice teachers knowledgeable about gender-equitable classroom practices in the areas of teacher-student interaction, classroom management and organization, and student expectations?

2. To what extent do teacher education faculty include instruction on gender issues in their classes?

3. To what extent do teacher education faculty advocate the inclusion of such instruction in preservice programs?

Literature/Theoretical Framework

Twenty-five years of research have familiarized us with gender bias related to K-12 curricula and materials, sex-role stereotyping, instructional methods, learning styles, classroom interactions, and extracurricular activities. In addition, we are aware of the decline in self-esteem, educational goals, and career plans among young females (AAUW, 1992; Sadker & Sadker, 1994).

The student assessment instrument examined three major categories of gender-equitable classroom practices: teacher-student interactions, classroom management/organization, and student expectations.

This presentation forms part of a larger effort identifying the factors that facilitate teaching and learning about gender.

Most teachers do not consciously expect different achievement levels by gender, yet subtle differential expectations of male and female students are present in many classrooms (Good & Brophy, 1987; Grossman & Grossman, 1994; Hallinan & Sorenson, 1987). Teacher expectations are discussed in the AAUW (1992) study as one of many factors leading to a sharp decline in female self esteem from elementary to secondary school: 60% of elementary females and 69% of elementary males report being happy with themselves, whereas by high school, 46% of males and only 29% of females report being happy with themselves.

In part because of low self-confidence, females do not enroll in advanced science and mathematics classes and, therefore, seek college entry with about one year less physical science and one half year less chemistry than males do (White, 1992). In a study of 1,340 elementary, middle school and high school students in rural, urban and suburban Michigan school districts, 89% of the students offered sex-stereotyped explanations for success in various subjects. In addition, 93% believed that occupations are gender specific (Michigan State Board of Education, Office for Sex Equity in Education, 1992).

Differences in quality of instructional input resulting from differential expectations for males and females were found in a study of 12 experienced elementary teachers (6 male, 6 female) teaching college freshman students. While there were no differences in performance scores based on teacher expectations, sex-typed teaching was present (Page & Rosenthal, 1990). Teacher expectations have also been found to allow for little variation in student differences. Boys represent 71% of the learning disabled students identified, a majority of early grade retentions, and 80% of the students labeled emotionally disturbed (Sadker & Sadker, 1989; 1994). In a study of 50 female teachers' perceptions of 109 preschool males and 94 preschool females it was found that the teachers perceived less compliant females to be less competent (Gold, Crombi & Noble, 1987).

In the 1991 Michigan study 74% of the students expressed belief that boys and girls are treated differently. In this same study, the students thought that males' lives were easier and more fun and that females were often demeaned (Michigan State Board of Education, Office for Sex Equity in Education, 1992). Similar findings are discussed in a Wisconsin study of 3,363 students (Riley, Baldus, Nelson, Schuler, & Keyes, 1993).

Researchers have consistently found that, overall, male students demand and receive more attention, both positive and negative (Baker, 1986; Eccles, 1989; Fennema & Peterson, 1986; Morse & Handley, 1985; Putnam & Self, 1988; Sadker & Sadker, 1982, 1986). One reason that males receive more interactions with teachers is that teachers spend more time disciplining males for inappropriate behavior; boys receive two and one half times more disapproving comments than girls do (Good & Brophy, 1987).

Interactions in 40 math classrooms coded over a period of 10 days revealed an imbalance of interactions. Over half of the students had no interactions with the teacher while the rest of the class (the majority of whom were male students) had 14 or more interactions (Eccles, 1989). A study of teacher interactions (Jungwirth, 1991) found that teachers glossed over mathematics errors with males and magnified mathematics errors with females. High-achieving females received the largest number of discouraging statements and least amount of praise (Purcell and Stewart, 1990).

Interactions can be inherently biased because of the bias the English language transmits (Richardson, 1989). According to Streitmatter (1994), gender differentiated attitudes may be reinforced due to the bias of the English language. Disparity of interactions can also be seen across subject areas. In the areas of science and mathematics, interaction patterns particularly favor male students (Baker, 1986; Banks & Banks, 1992; Fennema & Peterson, 1986; Morse & Handley, 1985). However, in reading and writing, teachers spend more time instructing and attending to females (Grossman & Grossman, 1994; Pflaum et al., 1980).

The physical and emotional classroom environment affects gender-equity efforts. Authors and publishers still use male pronouns to describe individuals whose gender is unknown, history books contain few role models for females, and literature portrays females as helpless, males as adventurous (AAUW, 1992; Grossman & Grossman, 1994; Sadker & Sadker, 1986; Smith, Greenlaw, & Scott, 1987; Tetreault, 1985). In a 1992 survey of 16 fourth through sixth grade classes, students were found to have difficulty naming famous females; an upper elementary 1992 world history textbook included only 11 pages of information on females (Sadker & Sadker, 1994).

Teachers tend to choose methods, materials and curriculum favoring the needs of males (AAUW, 1992; Baenninger & Newcombe, 1989; Shakeshaft, 1986). A study of a third grade classroom learning about the Middle Ages revealed that students were told about three males every minute and one female every six minutes. Upon interview, students could not remember the females from the lesson (Alton-Lee, Densem, & Nuthall, 1991). Lectures where males receive the majority of the questions and encouragement often precede or take the place of laboratory classes even though females' best learning styles are participation and discussion (Belenky et al., 1986; Style, 1982).

Observers of 100 classrooms in grades four through eight, found that classrooms were sex segregated and teachers often located themselves in the boys' section (Sadker & Sadker, 1986). While disabilities occur in nearly equal proportion in each gender, only 33% of the qualifying females are actually enrolled in special education classes, females are older when they are referred, and few females are in remedial programs (Michigan State Board of Education, Office for Sex Equity in Education, 1989). Females are also likely to be placed in lower math groups than appropriate for their test scores (National Science Foundation, 1990; Sadker & Sadker, 1994).

Males are disciplined more harshly than females and are also spoken to in less nurturing and harsher tones (Eccles & Blumenfield, 1985; Boudreau, 1986). Sexual harassment by either gender meets with little interference from teachers or administrators (Stein, 1992, 1993; Thorne, 1993). The message of language, curricular materials, classroom grouping and classroom management is a stereotypical message for both genders (AAUW, 1992; Grossman & Grossman, 1994; Sadker & Sadker, 1994).

The Faculty Survey Instrument was informed by the same theoretical framework that was used for the student assessment instrument, i.e., research on gender-biased classroom practices. In addition, since androcentric patterns have also prevailed in educational theory and in the discipline of education itself, the following literature on these patterns also formed the theoretical background for the Faculty Survey Instrument.

Educational psychology has relied heavily on models of male development, often to the exclusion of models of female development (Belenky, Clinchy, Goldberger & Tarule, 1986; Gilligan, 1982). The view of teaching as a "women's" profession has not only brought with it suggestions of misogyny, disempowerment and low status but also devalued the care-taking role (Laird, 1988; Lather, 1983; Shakeshaft, 1986; Strober & Tyack, 1980).

Growing awareness of gender bias in schools and legislative reform efforts beginning with Title IX in 1972 provided crucial motivation for improving K-12 educational practices (Stein, 1993; Stromquist, 1989). Fervent and sustained work by feminist scholars also established philosophical and psychological foundations for thoughtful reflection and ongoing effort (Lerner, 1981; Maher & Tetreault, 1994; McIntosh, 1984, 1989; Sleeter, 1993; Tetreault, 1985). There has been no shortage of professional commentary relating to gender bias in education and ways in which teachers can address the problem. Indeed, teacher education programs would seem a supremely logical place to begin.

Early research revealed, however, that teacher education programs rarely mandated or integrated gender-equity instruction in their curricula. Few programs addressed it at all. Of those that did, few offered separate courses; integrated instruction was limited; peers and students were indifferent or hostile; competence in gender-fair teaching was not required; accreditation and state certification requirements provided little support (Howe, 1973; Lather, 1983; McCune & Matthews, 1975; Sadker, 1981; Wilson, 1993).

At the same time this research effort was undertaken with individual teacher education faculty, a tandem study was conducted in the same institutions to assess the extent of overall programmatic inclusion (as differentiated from inclusion by individual faculty members). It found limited evidence of program-wide gender-related instruction and little ongoing faculty discussion, administrative support, supportive policy statements, or course offerings related to gender issues in education (Mader, 1994).

Methodology

The research was conducted with student teachers and teacher education faculty in one midwestern state. The state provides a large cadre of new teachers each year; two of the state's programs ranked sixth and seventh in the nation in enrollment (American Association of Colleges of Teacher Education, cited in Stewart, 1992). The state does not mandate gender equity instruction.

The student subjects of the study were 758 preservice teachers at three universities in this state, 96% of whom had attended high school in the midwest. The preservice teachers in the sample were attending their required student teaching orientation session. Of the 758 subjects, 214 identified themselves as males, 529 as females Fifteen subjects gave no response regarding gender. A chi-square goodness of fit analysis with the 1993-94 population of practicing teachers (Statistical Abstract, 1995, p.77) revealed there were no differences on the variables of gender (X^2 (1) = 1.09, p = .05) or ethnicity (X^2 (4) = 8.29, p = .05) between the sample and the teacher population. The ethnic background of the 758 subjects appears in Table 1.

The student study was a quasi-experimental study utilizing both quantitative and qualitative methods. Two instruments will be discussed: the researcher-developed demographics instrument and the researcher-developed instrument to assess knowledge of gender-equitable classroom practices.

The Assessment Regarding Classroom Practices (ARCP) was created using gender equity literature to prepare the questions. Three major categories of gender-equitable classroom practices were addressed in the preparation of the instrument: teacher expectations of students, teacher interactions with students, and classroom management and organization. The questions were reviewed by a panel of five experts and the resulting 37 true/false/unsure response items were pilot-tested using a sample of 103 preservice teachers from a university not included in the study, resulting in a .84 internal consistency reliability estimate using Cronbach's alpha.

Forty-five minute classroom observations were also conducted during the second half of a 15-week student teaching experience to explore the validity of the instrument using a total of seven pilot subjects (four high-scoring and three low-scoring). An informal seating chart identified each student's gender, interactions were recorded with behavior codes and tally marks, and percentages of various interactions were calculated by gender. Notes and/or quotes from preservice teachers and the students were written on an observation worksheet with a list of major concepts covered in the ARCP instrument. Although both groups of student teachers exhibited some inequitable classroom practices, the four high-scoring student teachers exhibited more gender-equitable classroom practices and better classroom management skills than did the three low-scoring student teachers.

A general description of the student sample was determined by collecting demographic data. The data in this instrument were used to compare the sample subjects to the national picture of teachers in the field. The instruments were administered at an introductory session of the student teaching experience at each university. The researcher or designated university supervisors administered the instruments.

The subjects chosen for the Faculty Survey Instrument were the 247 full-time teacher education faculty members teaching in 29 of the 31 preservice teacher education institutions in the state. Of the remaining two institutions, one was excluded because it served as the pilot study institution; the other was undergoing major curriculum revision and in the transition between old and new sequences was deemed unlikely to be able to supply consistent program data. The institutions were publicly and privately funded, accredited and non-accredited by national organizations, and ranged in size from 15 to 700 graduates per year. All of the 29 institutions had approval from the state education department for programs leading to teacher certification. Inclusion of all types of institutions ensured that the focus could remain upon gender equity instruction rather than upon size, accreditation standards, or funding. Results, however, were cross-tabulated according to these characteristics.

The faculty population was further defined by the requirement that only faculty teaching preservice courses be studied. Since the charge of preservice education is the preparation of candidates for working with all students, specialized in-service and graduate studies were not considered suitable for this particular undertaking. A decision was also made to include only faculty teaching courses in the core professional education sequence at each institution, thus excluding courses taken only by candidates in certain programs, e.g., elementary/secondary; general education/special education. Likewise, faculty were included only if their course was housed in the professional education unit of the institution. Focusing on core courses, required of all candidates, and offered within the professional education units, provided a more consistent assessment of the extent to which all candidates were exposed to gender-related instruction. Faculty from 28 of the 29 institutions responded. Overall individual response rate was 53%; median institutional response rate was 65%.

The Faculty Survey Instrument contained 30 examples of gender-related topics which might be included in the teacher education curricula. Faculty were asked two questions for each of the 30 topics: (a) The extent to which they included this topic in their own classes, (b) The extent to which they thought the topic should be included somewhere in the teacher education program. The 30 sample items were selected from the literature described above to operationalize a range from simple to complex awareness of gender equity concepts, from subtle to overt bias, from formal curriculum to hidden curriculum, and from individual classroom practices to theoretical paradigms for teacher education. The intent of the instrument was to include a wide range of possible gender-related topics

which teacher education faculty might address in their classes. Descriptive statistics were employed including frequencies, percentages, measures of central tendency and variance.

The Faculty Survey Instrument was designed after an extensive search of the literature established that (a) no other instrument for such use existed; and (b) there was a sufficient amount of research on the topic to provide a valid basis for constructing such a measurement. Because the instrument was designed expressly for this effort, concern over construct validity was addressed by selecting the 30 items most representative of the professional literature on the topics of gender, sexism, bias, and feminism, all as they relate to educational practice and theory. The establishment of construct validity was beyond the scope of this exploratory study since the construct of gender equity would first have required a more precise empirical definition than it enjoys, and evidence other than self-report. The intent of the study was to explore the extent of gender-related instruction and educators' attitudes toward such instruction.

In addition to the 30 items described above, a demographic section ascertained faculty age, sex, rank, tenure status, race/ethnicity, and current teaching assignment. The researcher also correlated each returned instrument with program size, public/private status, and accreditation status of the respondent's institution. Two preliminary questions also asked respondents to estimate their overall familiarity with and classroom coverage of gender-related issues.

Results

Overall results of the student teacher and teacher education faculty studies showed low levels of student knowledge about gender, low levels of faculty instruction about gender, but high levels of faculty advocacy on gender as an appropriate topic for instruction in teacher education programs.

The ARCP student assessment instrument was scored and means, medians, ranges and standard deviations were computed for the total instrument and the three subsets of interaction, expectations, and management/organization (Table 2). On average, preservice teachers in this study answered fewer than 50% of the items on the ARCP although the percentage of correct answers was slightly higher on the Interaction and Expectation subsets. An examination of the frequency distribution of the ARCP revealed that 7.3% of the sample preservice teachers correctly answered 75% or more of the items on the ARCP, nearly 49% of the sample preservice teachers received a score below the median score, and 10% answered fewer than 25% of the items correctly.

Analysis of the subsets of the ARCP shows that preservice teachers scored slightly lower than 50% on the subset of Management/Organization than on the subsets of Interaction and Expectations. A frequency distribution revealed that approximately 64% of the preservice teachers in the sample scored below the median on the Management/

Organization subset of the ARCP. Also, the gender of preservice teachers significantly affected their knowledge of gender-equitable expectations as revealed in the results of t-tests for subsets of the ARCP by gender (Table 3).

The results of the study reveal that sample preservice teachers' knowledge of gender-equitable classroom practices is generally low as indicated by the mean scores on the 37-item ARCP and the three subsets. The preservice teachers studied scored an average of below 50% on the ARCP items. Further, preservice teachers were found to score (a) slightly lower than 50% of the sample in the area of classroom management and organization, and (b) only slightly higher than 50% of the sample in the areas of teacher-student interaction and teacher expectation.

On the Faculty Survey Instrument, the faculty demographic profile showed an established, traditional faculty representing a wide range of institution types. More than 44% of the respondents were over the age of 50. Caucasians comprised 90% of the respondents. Questions on tenure status revealed that almost 42% were tenured, 28% tenure track, and 30% "other." All ranks were represented: approximately 23% full professors, 26% associate, 31% assistant, 20% "other." A variety of teaching areas was represented: foundations, methods, clinical, psychology and human development, and "other". More females (56%) than males (44%) returned the instrument although it was sent to males and females in nearly equal proportion (Table 4). Public and private institutions were well represented, as were large and small programs, accredited and non-accredited. (Table 5)

When asked to describe their overall coverage of gender issues in their classes and familiarity with the issues, only 3% of the faculty respondents reported no instruction. Some 35% characterized their familiarity as minimal, 62% as moderate or extensive. No respondents indicated total absence of familiarity with the subject. (Table 6)

The first 10 of the 30 sample topics included familiar concepts in gender-equitable education such as textbook bias, curriculum bias, Title IX legislation, sexual harassment prevention, and gender-fair lesson planning. Almost 25% of the respondents indicated that no instruction was provided on these topics, yet 100% advocated inclusion of these topics somewhere in the teacher education curriculum. Only 7% of the respondents included in-depth coverage, yet 34% advocated inclusion in depth. (Table 7)

The second 10 of the 30 sample topics included more abstract and perhaps less familiar concepts such as classroom interaction, language bias, learning styles, and gender-differentiated values attribution. Response ranges were similar to those for the first 10 sample topics: 25% providing no instruction, 98% advocating inclusion. Only 10% of the respondents provided in-depth coverage of the topics, but 35% advocated in-depth coverage. (Table 8)

The final 10 of the 30 sample topics included the most abstract and philosophical concepts; for example, gender-specific concepts of success, over-reliance on male developmental models, androcentric bias in the discipline, and implications of teaching as a female profession. Actual coverage of these 10 topics was even lower than on the previous 20 topics; advocated coverage was somewhat lower. Over 42% provided no inclusion, compared to 95% advocating inclusion. Only 6% of the respondents provided in-depth coverage, compared to 21% advocating in-depth coverage. (Table 9)

Summary data for the Faculty Survey Instrument show an overall non-instruction rate of 30%, with an in-depth instruction rate of 8%. Advocacy levels were much higher, however: Only 2% of the respondents advocated no instruction on these topics in teacher education programs, while 98% advocated at least some instruction. Almost 30% of the respondents favored in-depth coverage. (Table 10)

Clearly, the data analysis of the two instruments revealed consistent results that gender-related issues are not given in-depth instruction by teacher education faculty; nor do teacher education students have in-depth knowledge of these issues, at least not in the three institutions forming the basis of the student assessment or the 29 institutions forming the basis of the faculty study.

Conclusions

The generally low levels of knowledge and instruction revealed by these research efforts is consistent within the populations studied and also consistent with most previous research. However, data also suggests that some progress might be occurring.

In general, the data from the ARCP student assessment show that student teachers have a low level of knowledge of gender-equitable classroom practices. Patterns in the data show that (a) overall, preservice teachers scored lowest on the subset of management/ organization questions, and (b) within the subsets, females scored higher on the subset of expectations questions.

In a recent study of 25 physical education student teachers at a large Midwestern university, researchers found that student teachers displayed little knowledge of gender-equitable teaching strategies and had little information regarding a student's rights under Title IX (Martin & Lock, 1991). In an earlier study of 106 preservice education majors (32 males and 74 females) who described gender bias in their schooling, 67% experienced differential expectations in physical education, 55% experienced differential expectations of behavior and maturity, 53% experienced differential academic expectations especially in science and mathematics, 48% were assigned gender-biased roles, 43% experienced differential attention, and almost 40% experienced stereotypical statements made by teachers. Further, many of the bias examples given were from the university experiences (Sardo-Brown, 1995).

Amodeo and Martin (1982) studied the effects of multicultural training on 27 graduate students (13 male, 14 female) at New Mexico State University. They found a significant difference in knowledge scores on pre and posttests, while there was no significant difference in attitude on pre and posttest scores. Sieferth, Alden, and Jacko (1980) found positive relationships between sex-role stereotyping and (a) secondary preservice teachers and (b) male preservice teachers. These findings led the researchers to conclude that the elementary school is a better place to begin dialogue on gender equity issues. In a more recent study of the effect of a human relations course on the attitudes of 876 preservice teachers (564 females, 312 males), there was a significant positive attitude increase regarding issues in gender equity, with females showing the greatest increase. The course included lessons and discussion groups reflecting on readings and class activities (Martin & Koppelman, 1991). Thus, there is little evidence to support the alternative conclusion that preservice teachers are knowledgeable about gender-equitable classroom practices.

A variable that may have had an effect on the final results of the student assessment is the student teaching experience. In an effort to change inequitable interaction patterns of teachers, Whyte (1984) provided evidence of their inequitable behavior and worked with teachers to create equitable behaviors. According to Hilke and Conway-Gerhardt (1994), "Student teaching is a critical time to check students' awareness of gender equity" (p.28). However, as stated previously, the researcher observed and/or interviewed seven volunteer student teachers from the pilot sample who scored high and low on the ARCP in an effort to gain insight regarding the instrument and actual classroom practice. Also, the researcher sought to measure knowledge gained prior to the student teaching experience.

The Faculty Survey Instrument reveals considerable divergence between what faculty do and what they think should be done. In their own classes, faculty members actually included gender-related topics at minimal to moderate levels; however, they advocated inclusion of these same topics at moderate to in-depth levels.

Although the gap between advocacy and actuality on the part of faculty is substantial, the research does offer grounds for encouragement, especially the fact that gender instruction has at least a limited presence in these preservice classrooms. Almost 70% of the faculty responses indicated at least minimal classroom coverage on gender equity topics. This finding offers greater evidence than earlier studies did about the presence of gender as a topic in the education of future teachers (Lather, 1983; Styer, 1982; Wilson, 1993). Equally encouraging is the extent to which faculty endorse gender as an appropriate topic for preservice instruction, contradicting earlier findings which noted overall faculty resistance and, sometimes, outright hostility . Such approval contradicts earlier findings related to faculty approval of gender-related instruction (Lather, 1983).

Less positive, however, is the actual extent and level of instruction provided. Only 5% of the responses indicated instruction at in-depth levels. At a time in history when sex

discrimination is against the law of the land, when school reforms tops the agenda of parents and legislators, and when, according to teachers and teacher educators, "Every child is a teachable child," it begs understanding as to why preservice education has not assumed a higher profile on issues of gender-related instruction.

Nor did this study of classroom instruction provide much evidence of concerted, systemic reform. Earlier commentaries attributed the absence of gender-related instruction to a lack of well-disseminated research, lack of accreditation standards, and lack of interest on the part of teacher educators (Girard, cited in Sadker & Sadker, 1985; Grant & Secada, 1990; Howe, 1973; Lather, 1983; Masland, 1992; Titus, 1993). Although the last several years have provided a watershed of sorts for gender issues in both the public and professional consciousness, and although the respondents in this survey, at least, were positive in their support of gender-related instruction to preservice teachers, attention to the topic in actual teacher education classrooms remained limited.

Furthermore, this study found only slight support for the belief that certain external factors account for the lack of attention to gender. No relationship was found between factors such as tenure status, rank, or teaching field and actual or advocated inclusion. Females were in favor of more instruction on topics 1-10, as were respondents from non-accredited institutions, but neither group was more likely to provide actual instruction in their own classrooms. Respondents over 50 years of age and respondents from public institutions were more likely to advocate instruction on topics 11-20 but were no more likely to provide actual instruction. The presence or absence of such instruction seems largely a matter of individual discretion, a finding which substantiates earlier research about the over-reliance of gender-related instruction on the efforts of but a few faculty members (Lather, 1983).

An aspect of the faculty study likely to affect the results was the unquantified nature of response choices. Although an effort was made in the survey construction to imply a quantitative relationship between response choices ("not at all" < "somewhat" < "in depth"), still, the question arises about the comparability of these response choices across the entire faculty respondent population. There is also the possibility that those more knowledgeable about the field of gender may have been teaching quantitatively more than others who were less knowledgeable, but they may have rated themselves at a lower level because they were aware of how extensive the topic was.

In reviewing the results of these studies, however, it is important to note that the researchers pursued several lines of evidence. Three separate university populations were studied for the student assessment and 29 for the faculty assessment, among which were the three universities from the student study. The results for each population were consistent with the results for the total population. Further, the results of each of the assessment subsets were consistent with each other and with the total assessments.

Implications for the Next Millennium

Reflections on the themes throughout the research base and the results of these studies have led the researchers to infer possible conditions and outcomes. Although the studies examined gender, some of these recommendations are just as viable for other equity areas, including multicultural education. Since all groups contain both genders, all equity areas are affected when preservice teachers acquire knowledge of the ways in which gender affects education.

1. Preservice students' knowledge of gender as it relates to education should be enhanced through the teacher preparation program.

2. Preservice students should receive focused instruction on teacher expectations, interactions, and management/organization issues in classrooms since these teaching practices have direct effect on K-12 students.

3. Teacher education programs must emphasize the importance of gender-equitable practices for both female and male preservice candidates.

4. Teacher education programs should examine the ways in which gender intersects with other student categories including race, class, culture, sexual orientation, disability, and other diversities.

5. Teacher education faculty should become familiar with and disseminate the wealth of research and commentary on gender issues in education--both pedagogical and philosophical.

6. Teacher education faculty should examine the reasons for the gap between their support of gender-related instruction and the actual incorporation of it into their classes.

7. Curricular decision-making should be examined so that inclusion of gender-related instruction is program-wide, not simply an individual faculty decision.

8. In the hiring process, prospective K-12 teachers and prospective teacher education faculty should be sought who are knowledgeable about gender issues in education. Individuals with such knowledge should be called upon to take leadership roles within their schools and college/university programs.

Just as our personal experiences and knowledge of gender originated, in part, in the classrooms where each of us learned, so must these experiences and knowledge be improved in the college and university classrooms where we educate teachers for the future.

STUDENT ASSESSMENT INSTRUMENT (ARCP)

Table 1: Preservice Students by Ethnic Background (N=758)

Caucasian	540	Asian American	10
African American	37	Native American	7
Hispanic	16	No Response	148

Table 2: Mean, Median, Range and Standard Deviations for ARCP and Subsets

ARCP		*N*	Mean	Median	Range	*SD*
Total Possible:	37	758	18.34	18.27	32	6.17
Subsets:						
Interaction Possible:	14		7.02	7.01	14	2.76
Expectations Possible:	13		6.76	6.68	13	2.31
Mgmt/Org. Possible:	10		4.56	4.57	10	2.23

Table 3: Results of *t* Tests for Subsets of ARCP by Gender

Gender	N	ARCP-Interaction			ARCP-Expectations			ARCP-Mgmt/Org		
		M	*SD*	*t*	*M*	*SD*	*t*	*M*	*SD*	*t*
Male	214	6.98	2.91	-0.49	6.31	2.35	-3.50*	4.47	2.25	-0.93
Female	529	7.09	2.70		6.96	2.26		4.64	2.30	

*$p<.05$

FACULTY SURVEY INSTRUMENT

Table 4: Faculty Profile (N=130)

Age (n=129)		Race/Ethnicity (n=127)		Sex (n=129)		Rank (n=128)	
Under 30	1%	Caucasian	90%	Female	56%	Full Prof	23%
31-40	11%	African American	5%	Male	44%	Associate	26%
41-50	44%	Hispanic American	1%			Assistant	31%
51-60	29%	Asian American	1%			Other	20%
Over 60	15%	Other	3%				

Current Teaching Assignment (n=129)				Tenure Status (n=129)	
Foundations	16%	Other	11%	Tenured	42%
Methods	24%	Combination	47%	Tenure Track	28%
Clinical	2%			Other	30%

Table 5: Institution/Program Profile (N=29)

Program Size (n=29)		Public/Private (n=29)		State Approval/Nat'l Accreditation (n=29)	
Under 100	45%	Public	45%	State Approval+Nat'l Accreditation	41%
101-300	34%	Private	55%	State Approval Only	59%
301-500	14%				
Over 500	7%				

Table 6: General Perspectives (N=128)

Estimate of Instruction on Topic (n=127)		Extimate of Familiarity With Topic (n=128)	
Extensive	11%	Extensive	29%
Moderate	51%	Moderate	61%
Minimal	35%	Minimal	10%
None	3%	None	0%

Table 7: Topics 1-10 (N=130)

Actual Inclusion (n=130)		Advocated Inclusion (n=128)	
Not At All	24%	Not At All	0%
Somewhat	69%	Somewhat	66%
In Depth	7%	In Depth	34%

Table 8:Topics 11-20 (N=128)

Actual Inclusion (n=128)		Advocated Inclusion (n=125)	
Not At All	25%	Not At All	2%
Somewhat	65%	Somewhat	63%
In Depth	10%	In Depth	35%

Table 9: Topics 21-30 (N=128)

Actual Inclusion (n=128)		Advocated Inclusion (n=126)	
Not At All	42%	Not At All	5%
Somewhat	52%	Somewhat	74%
In Depth	6%	In Depth	21%

Table 10: Topics 1-30 (Summary) N=130)

Actual Inclusion		Advocated Inclusion	
Not At All	30%	Not At All	2%
Somewhat	62%	Somewhat	68%
In Depth	8%	In Depth	30%

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